NETC Enterprise Dashboards Background and Samples

March 2004

Dashboards: Tools for Enterprise Performance Management (EPM)

- An automobile's dashboard tells the driver the status of the vehicle – How ***fast*** it's going, how much fuel it has, whether the **oil** pressure is holding, and other indicators with ranges or warnings that allow the user to determine if performance is or is not acceptable
- Like the instrument panel on an automobile – EPM Dashboards provide users the ability to monitor the performance of key indicators

Dashboards: Tools for EPM

- Dashboards - known as ***Enterprise Performance Dashboards*** (EPD) - are used as ***Enterprise Performance Management*** (EPM) tools
- Dashboards must focus on ***Key Performance Indicators*** (KPI) – KPIs are those issues that provide the greatest ***Return on Investment*** (ROI) when improved
- Dashboards are designed to give executives timely insight into performance issues and share that insight across the enterprise – *without the staff meetings!*

Why are EPDs the Way to Display Data?

- Current status of a particular concern or project is available online, from any desktop, 24/7
- Once an EPD is built, it is continuously available for review and the data is automatically updated
- The ***same*** information is disseminated across the enterprise, so all organizations/departments/ stakeholders are working from the same “sheet of paper”
- Tailor-able overview data for executives – if executives are only interested in certain items, then only those items are placed in their portal

Why are EPDs the Way to Display Data?

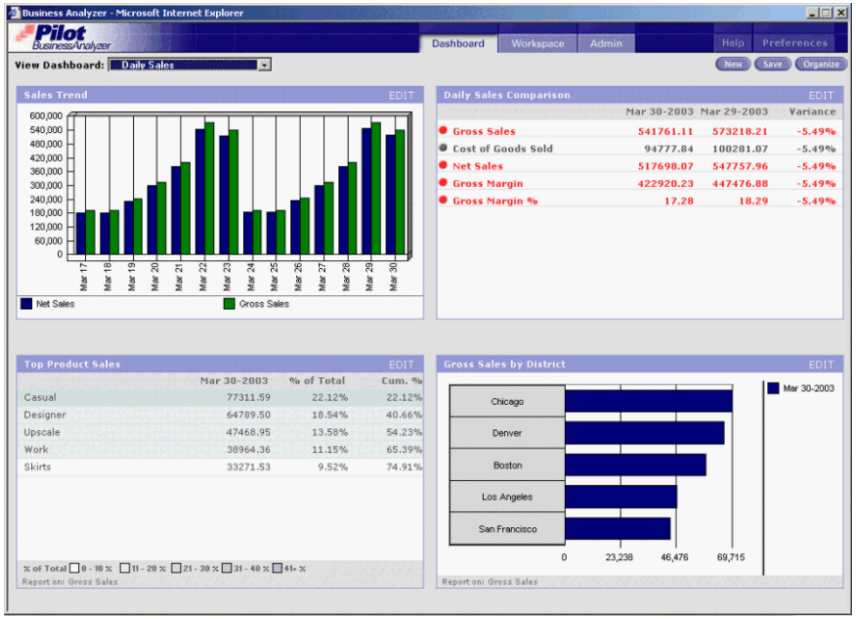
- Detailed data for managers - allows managers to resolve issues or have answers to questions - before they are elevated to higher levels
- EPD are only the first step – must be part of a Balanced Scorecard system and eventually encompass score-carding as a business methodology

Why are EPDs the Way to Display Data?

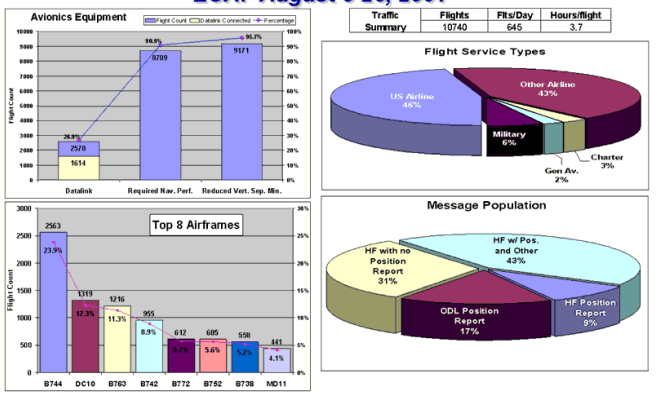
- Saves organization man-hours – don’t have to generate paper-based “Dashboards” – ends the “hunt for data” expeditions
- Data display ensures correct data is available - Enterprise benefits by having updated data available to make decisions from
- Staff meeting reductions possible – Clear representation of data means more productive meetings

Corporate Dashboards Examples

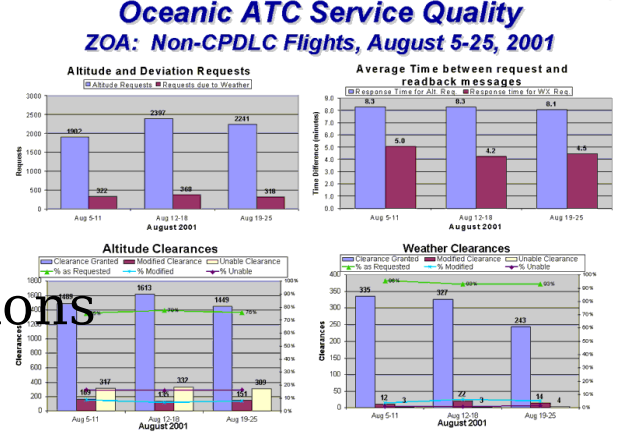
Civilian Sector Examples



Gross Sales/Net Sales – Trends - Regions



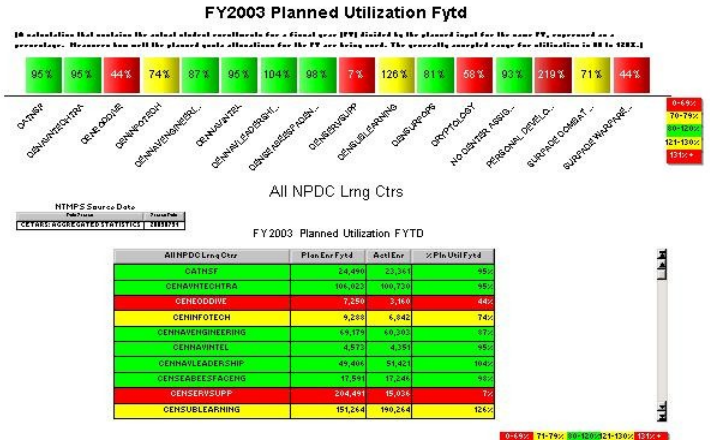
Airframes – Avionics – Flight Type



ATC Service – Weather – Times - Clearances

Dashboards: Tools for EPM

NPDC Examples



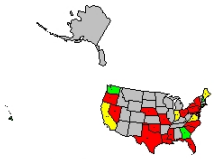
Planned Utilization FYTD

TYCOM Grad Requirements Satisfied by Region

Rqmts identifies the number of graduates set by the type commanders to meet training requirements. Rqmts Satisfied is the number of graduates onboard not exceeding 100 percent of the requirement. % Satisfied is the number of Rqmts Satisfied as a percentage of Rqmts.

Data Source	Source Date
CETARS: COURSE GRADS	20030905
COMNAVAIRFORINST 350...	20030210
COMSUBPAC/LANT NOTIC...	20011001
COMSURFORINST 3201.1...	20020227

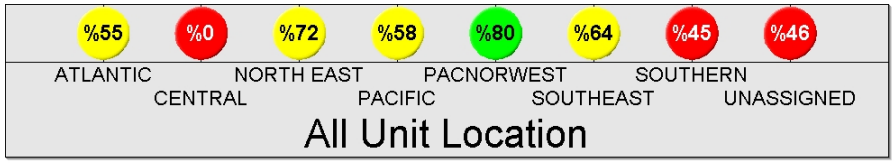
Data Source = COMSUBPAC/LANT NOTICE 1500



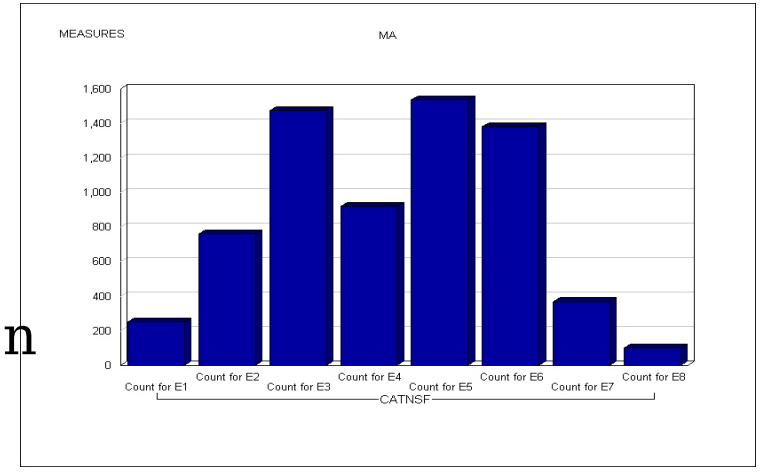
All U.S. Locations

All Unit Location	Rqmts	Rqmts Satisfied	% Satisfied
ATLANTIC	38,399	21,239	%55
CENTRAL	16	0	%0
NORTH EAST	14,452	10,396	%72
PACIFIC	49,208	28,412	%58
PACNORWEST	20,475	16,362	%80
SOUTHEAST	25,739	16,345	%64
SOUTHERN	3,460	1,564	%45
UNASSIGNED	5,533	2,522	%46

Red: < 50%
Yellow: 50 - 75%
Green: > 75%

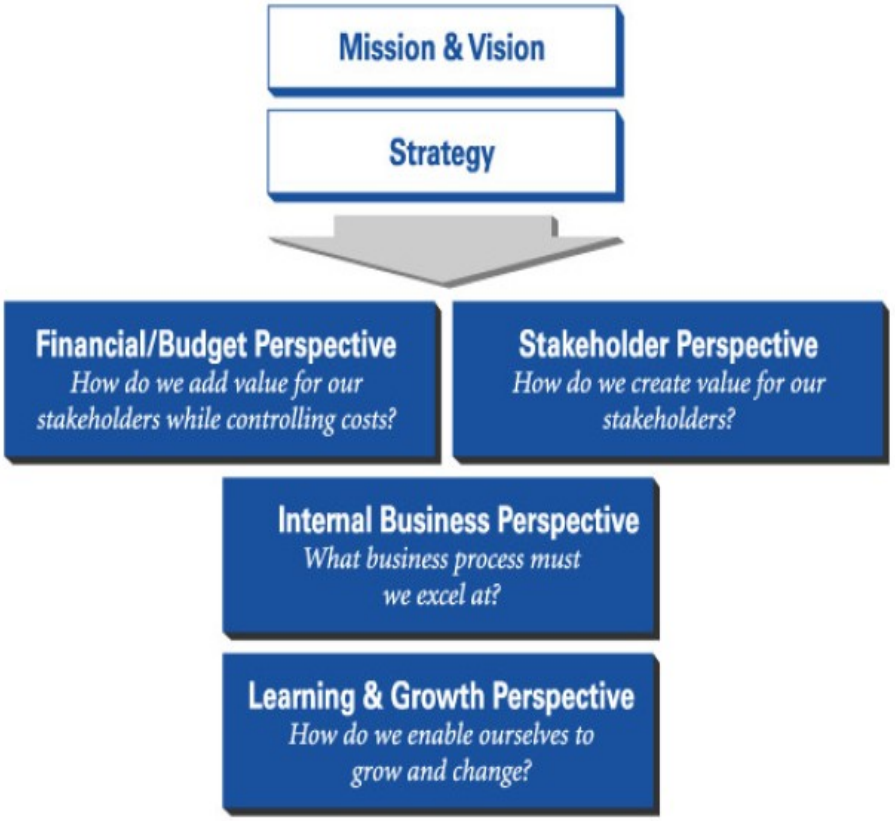


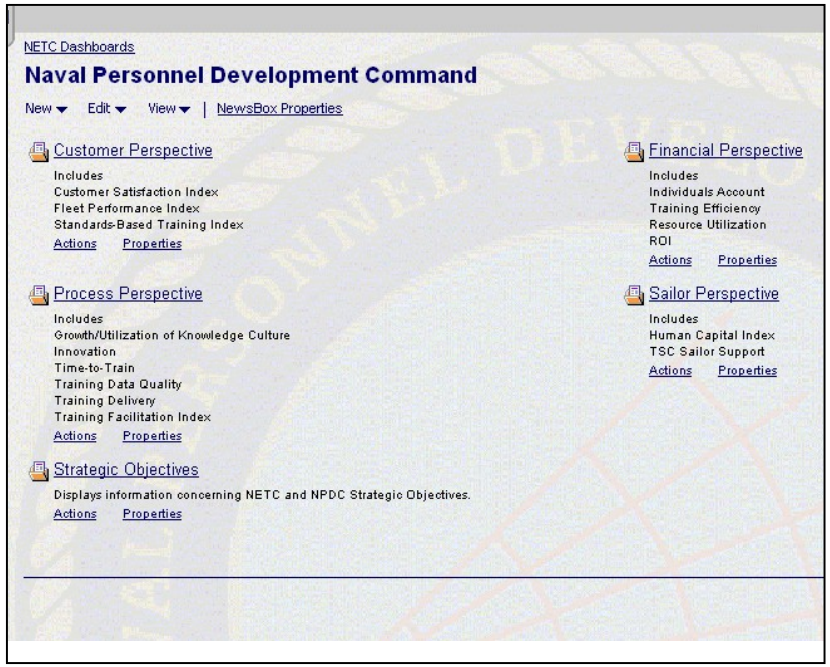
TYCOM Requirements by Region



Paygrade Counts by LC

Scorecard Layout





- Balanced Scorecard for Government Agencies
- NPDC Balanced Scorecard

Stakeholder/Customer Perspective

- Whom do you serve and how do you ***best*** meet their requirements?
- Captures the ability of the organization to provide quality goods and services, effective delivery, and overall stakeholder satisfaction
- This perspective is most important perspective because reducing spending or increasing profits is not usually the goal for government agencies

Financial Perspective

- Managing the budget to obtain desired results at minimal cost or with the greatest efficiency.
- Returns can be calculated as a combinations of savings achieved and reallocation of funds to new projects

Internal Process Perspective

- This perspective provides insight into how well your agency performs its function
- Focuses on key processes at which the organization must excel to continue adding value for its stakeholders
- Looks at service development and delivery, partnering with other agencies

Growth/Sailor Perspective

- The objectives in the learning and growth perspective provide the foundation to enable the achievement of the other three perspectives
- Operating as mission-based organization, government agencies rely heavily on the skills, dedication, and alignment of their staff to achieve their goals. Motivated employees with the right mix of skills and tools, operating in an organizational climate designed for sustaining improvements, are the key ingredients in achieving organizational objectives

EPD Pitfalls

- Develop EPDs for all the data related to the organization.
  - An effective EPD should target an initiative or a plan – only that data that affects the KPIs - future scorecards depend on a focused view with clear thresholds and metrics assigned to the data

EPD Pitfalls

- EPDs used as a basis for providing paper-based “dashboard” reports.
  - In many cases, this is done because the data in the data mart is not always as current as source and managers want to present the “most” current data. This presents an uneven data environment across the enterprise and everyone may not get the correct data

NETC
Dashboard Principals

- The basic metrics used for the NETC dashboards will be linked to strategic goals and be customer driven

- The dashboards will be a “living” presentation, changing as new data sources become available and new capabilities added

- As metrics are identified, “metric owners” will determine appropriate targets, thresholds, and required trends and metric cause and effect relationships with strategic goals

- The dashboards will include required predictive/lead indicators as they are identified by

NETC Dashboards Data Sources

- Goal is to incorporate useable data sources into the Navy training data warehouse. Integrating supporting data as much as possible through NTMPS ensures universal standards in the data and across the data presentations.

- As data sources and elements are identified and validated they can be used as isolated sources for data cubes until integration into NTMPS is possible

- NTMPS will update and integrate data

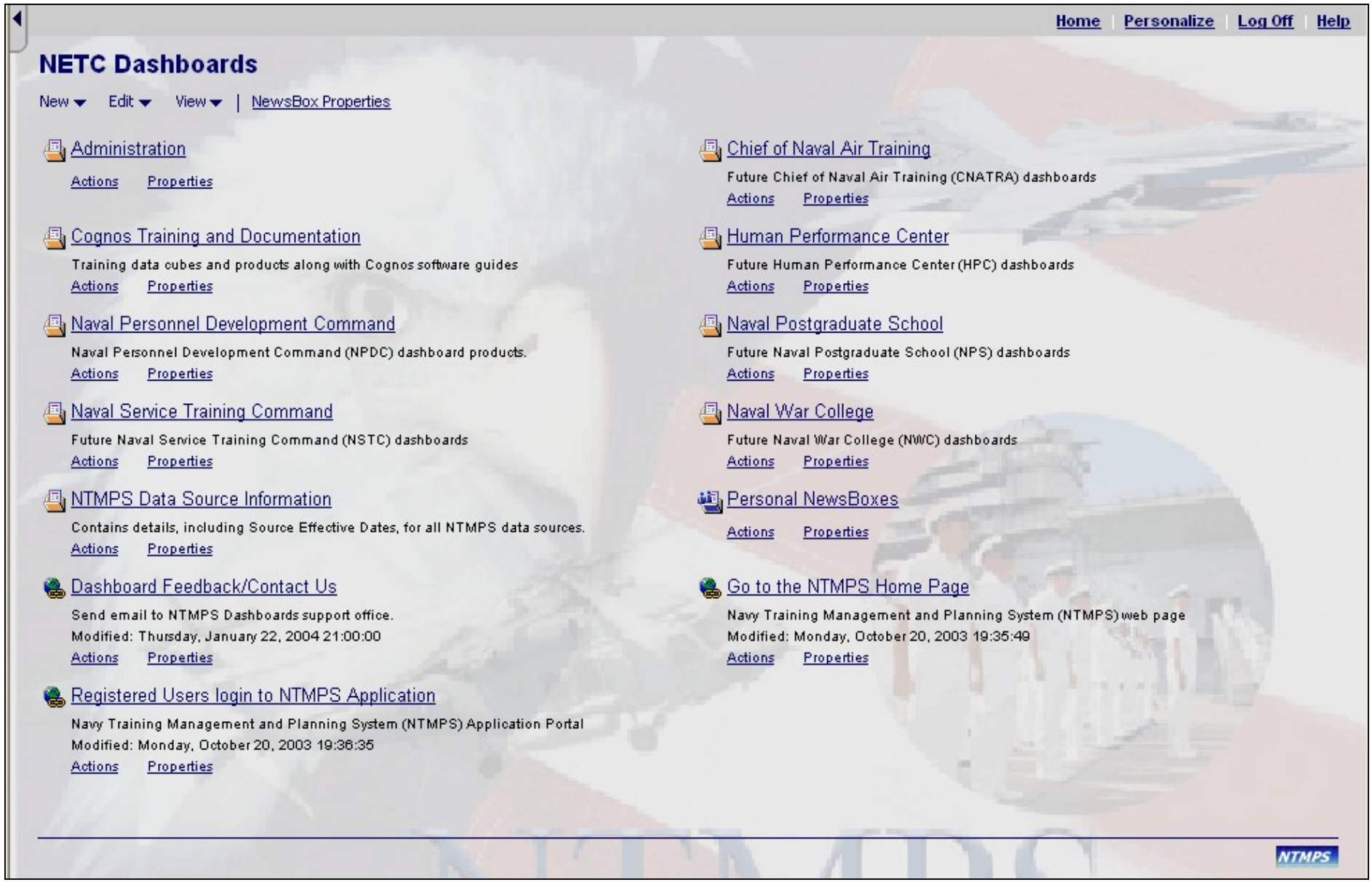
Cognos Business Intelligence Tools

- Enterprise Business Intelligence (BI) takes the volume of data your organization collects and stores, and turns it into meaningful information that people can use in their day-to-day activities. With information in accessible reports and analysis, you can make better and timelier business decisions. You have the means to understand the "*Why*" behind your business performance.
- The following tools are currently being used for the NETC Dashboard project:
  - Upfront/Access Manager
  - Visualizer
  - PowerPlay
  - Impromptu

Cognos Upfront & Access Manager

- **Upfront** is the customizable user interface that you use to publish, find, organize, and view your business intelligence data on the Web.
- **Access Manager** is used to set up users and user classes, and to grant access to protected data sources/Upfront Newsboxes. The system administrator assigns access privileges to users and user classes.

NETC Dashboards Upfront Web Portal

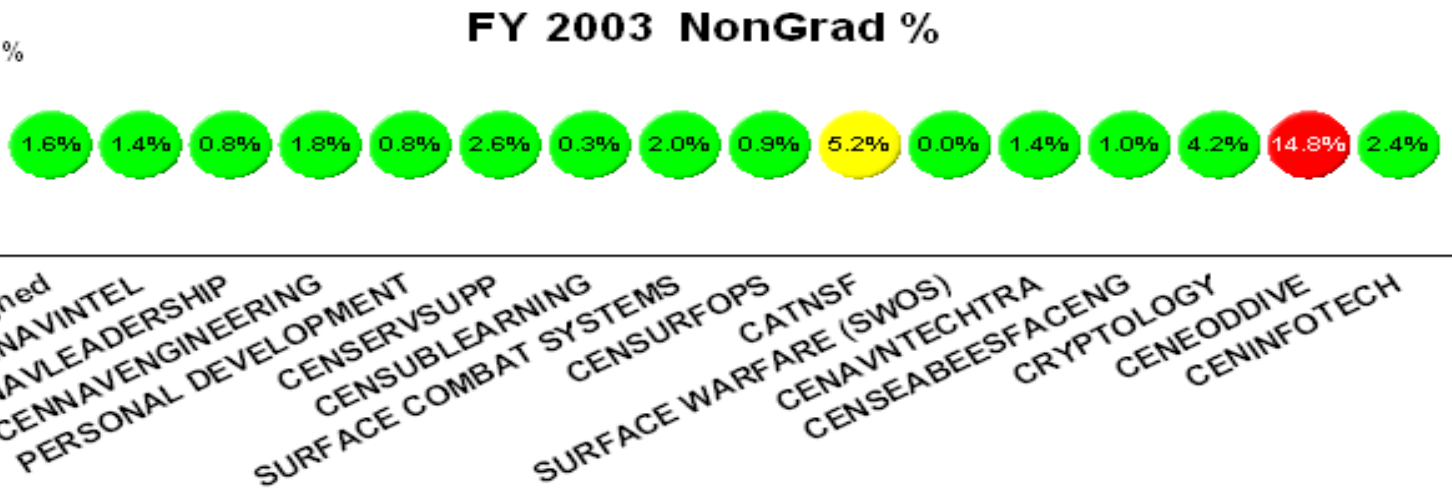


Cognos Visualizer

- **Cognos Visualizer** uses sophisticated visual reports ("visualizations") to communicate complex business data quickly and intuitively.
- Using visualizations, you can display multiple measures simultaneously and create dashboards with a diverse selection of maps and charts. When people view several reports at once, they can see how information correlates and make better decisions.

Visualizer Example

Green: < 5%
Yellow: 5 to 10%
Red: >10%



NTMPS Main Data Sources

Data Source	Source Date
CETARS: AGGREGATED STATISTICS	20030930
PISTOL	20031115
CETARS: STUDENT GRADS	20031205
COMSECONDNCB/COMTHIRDNCB INST ...	20030820

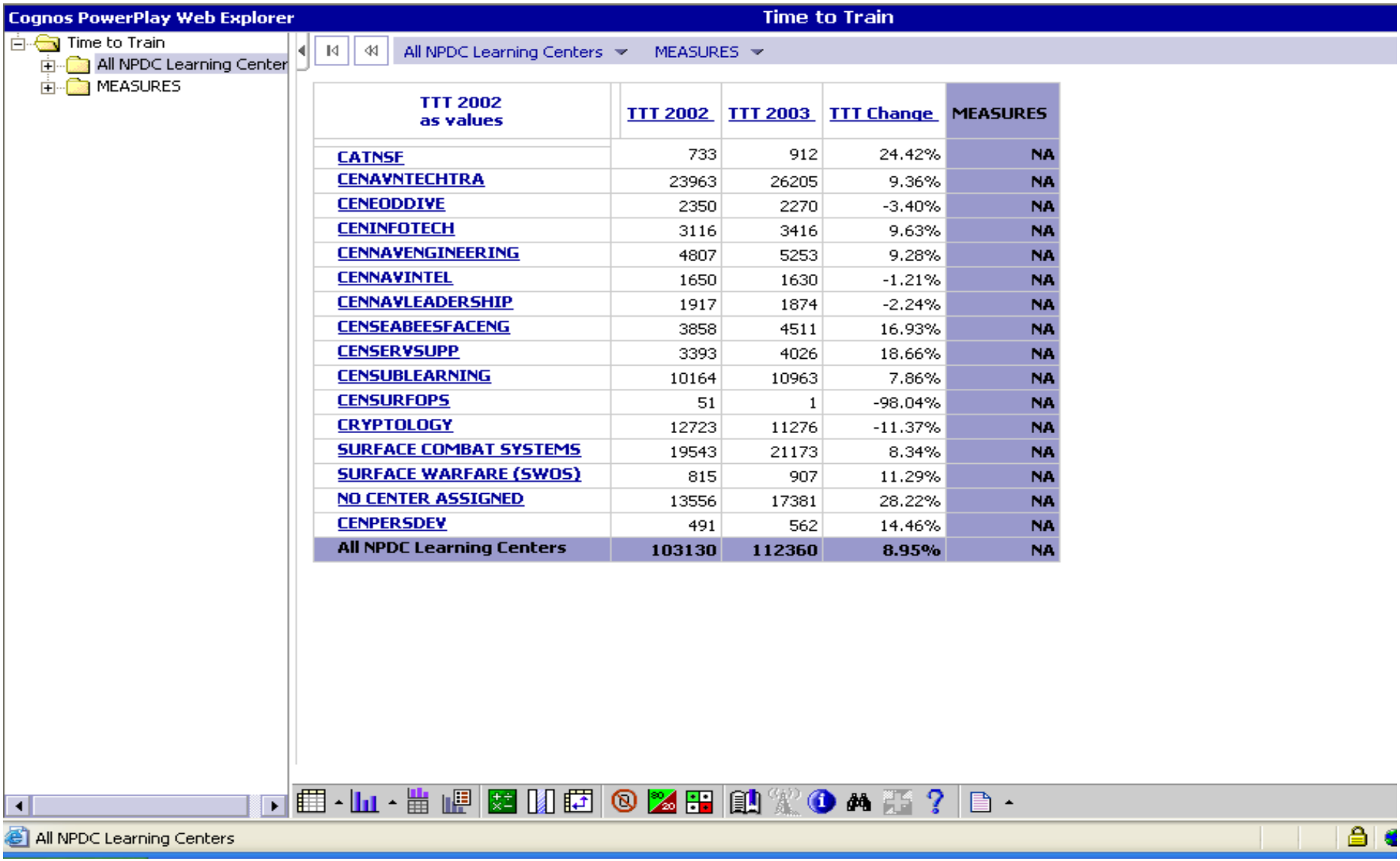
FY 2003
Total Non-Grad Percent and Number of Non-Grads

All NPDC Lrng Ctrs	Non Grad Percent	Total NonGrads
No Center Assigned	1.6%	959
CENNAVINTEL	1.4%	52
CENNAVLEADERSHIP	0.8%	355
CENNAVENGINEERING	1.8%	904
PERSONAL DEVELOPMENT	0.8%	202
CENSERVSUPP	2.6%	328
CENSUBLEARNING	0.3%	446
SURFACE COMBAT SYSTEMS	2.0%	586
CENSURFOPS	0.9%	57
CATNSF	5.2%	1,043
SURFACE WARFARE (SWOS)	0.0%	0
CENAVNTECHTRA	1.4%	1,159
CENSEABEESFACENG	1.0%	133
CRYPTOLOGY	4.2%	273
CENEODDIVE	14.8%	371
CENINFOTECH	2.4%	134

Cognos PowerPlay

- **PowerPlay** is OLAP (online analytical processing) software. Allows you to perform your own multidimensional analysis, create reports, and share them to make better decisions. You can explore large volumes of summarized data with sub-second response times.
- PowerPlay draws information from relational databases to model and build PowerCubes ("Cubes")/Multidimensional Cubes (MDCs). Cubes are optimized data sets that enable users to perform analysis with quick response times. They can be small or large, containing more than a billion rows of data and 2 million categories.

PowerPlay/MDC Example

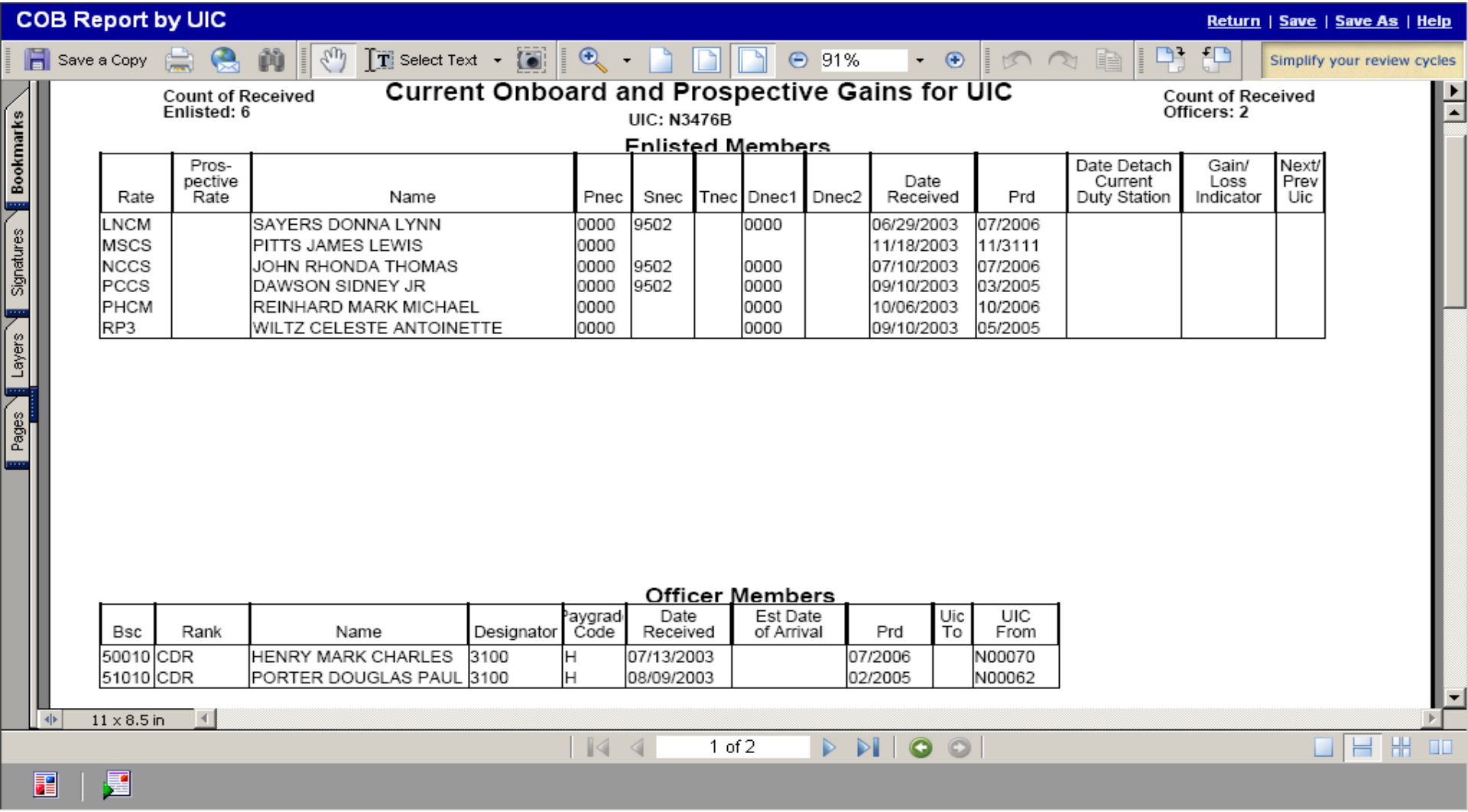


TTT 2002 as values	TTT 2002	TTT 2003	TTT Change	MEASURES
CATNSF	733	912	24.42%	NA
CENAVNTECHTRA	23963	26205	9.36%	NA
CENEODDIVE	2350	2270	-3.40%	NA
CENINFOTECH	3116	3416	9.63%	NA
CENNAVENGINEERING	4807	5253	9.28%	NA
CENNAVINTEL	1650	1630	-1.21%	NA
CENNAVLEADERSHIP	1917	1874	-2.24%	NA
CENSEABEESFACENG	3858	4511	16.93%	NA
CENSERVSUPP	3393	4026	18.66%	NA
CENSUBLEARNING	10164	10963	7.86%	NA
CENSURFOPS	51	1	-98.04%	NA
CRYPTOLOGY	12723	11276	-11.37%	NA
SURFACE COMBAT SYSTEMS	19543	21173	8.34%	NA
SURFACE WARFARE (SWOS)	815	907	11.29%	NA
NO CENTER ASSIGNED	13556	17381	28.22%	NA
CENPERSDEV	491	562	14.46%	NA
All NPDC Learning Centers	**103130**	**112360**	**8.95%**	**NA**

Cognos Impromptu

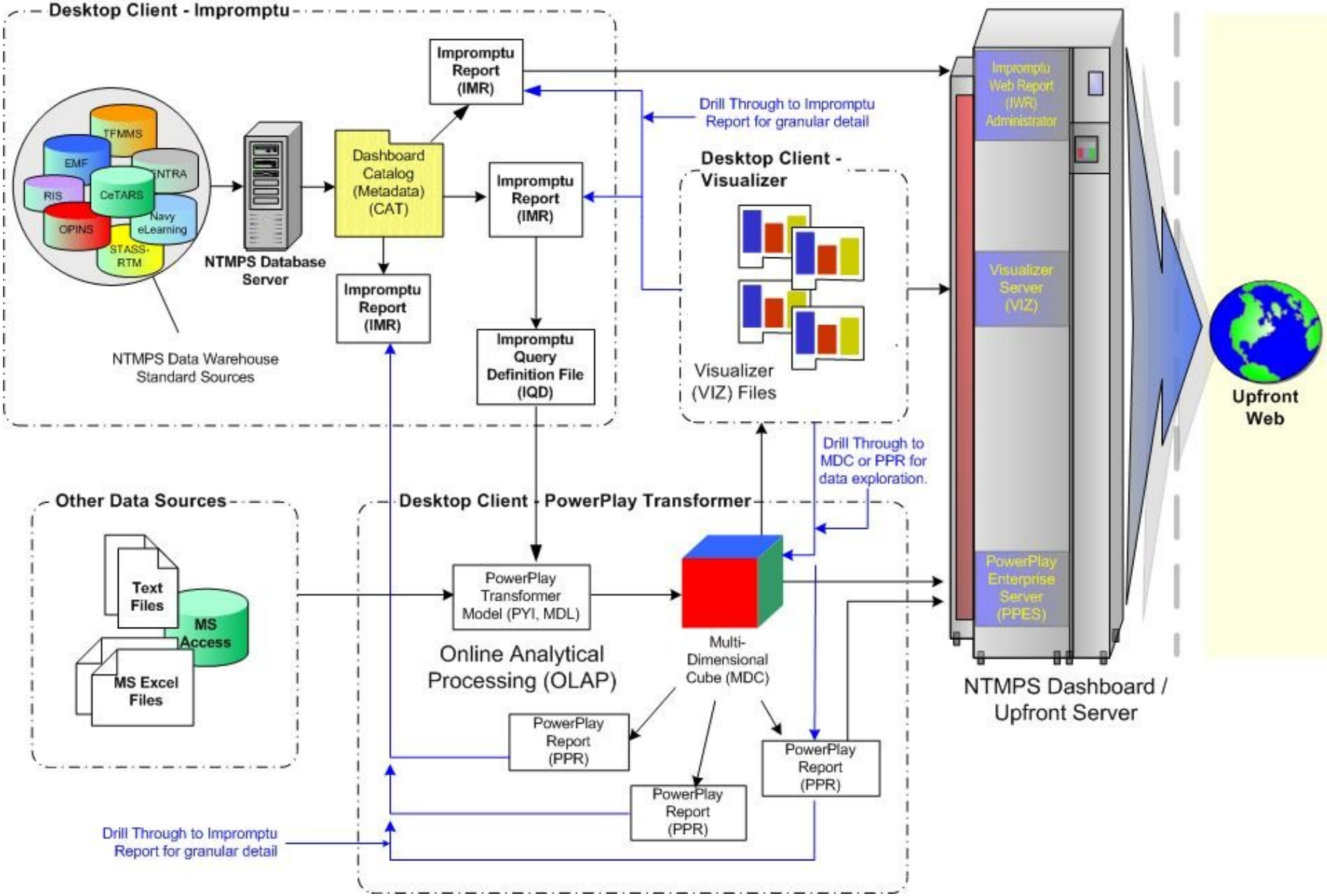
- **Impromptu Web Reports (IWR)**. Using reports created in Impromptu, Impromptu Web Reports delivers managed, print-ready reports across the Web for large groups of report consumers. Users can subscribe to published reports, and customize them to meet their specific needs.

IWR Example


COB Report by UIC
Return | Save | Save As | Help
Save a Copy
Select Text
91%
Simplify your review cycles
Bookmarks
Signatures
Layers
Pages
Count of Received Enlisted: 6
Current Onboard and Prospective Gains for UIC
UIC: N3476B
Count of Received Officers: 2
Enlisted Members
Rate | Pros-pective Rate | Name | Pnec | Snec | Tnec | Dnec1 | Dnec2 | Date Received | Prd | Date Detach Current Duty Station | Gain/ Loss Indicator | Next/ Prev Uic
LNCM | | SAYERS DONNA LYNN | 0000 | 9502 | | 0000 | | 06/29/2003 | 07/2006
MSCS | | PITTS JAMES LEWIS | 0000 | | | | | 11/18/2003 | 11/3111
NCCS | | JOHN RHONDA THOMAS | 0000 | 9502 | | 0000 | | 07/10/2003 | 07/2006
PCCS | | DAWSON SIDNEY JR | 0000 | 9502 | | 0000 | | 09/10/2003 | 03/2005
PHCM | | REINHARD MARK MICHAEL | 0000 | | | 0000 | | 10/06/2003 | 10/2006
RP3 | | WILTZ CELESTE ANTOINETTE | 0000 | | | 0000 | | 09/10/2003 | 05/2005
Officer Members
Bsc | Rank | Name | Designator | Paygrad Code | Date Received | Est Date of Arrival | Prd | Uic To | UIC From
50010 | CDR | HENRY MARK CHARLES | 3100 | H | 07/13/2003 | | 07/2006 | | N00070
51010 | CDR | PORTER DOUGLAS PAUL | 3100 | H | 08/09/2003 | | 02/2005 | | N00062
11 x 8.5 in
1 of 2

NETC / NTMPS Dashboards

Cognos Tools and Data Interfaces



Lessons Learned

- All metrics must have a tie back to a strategic goal in some way.
- Start with a few basic metrics and expand as needed to enhance the strategic goal being measured. The first set of dashboard products help an organization actually “learn” more about their data.
- Keep the metrics simple at first and then add detail (more drill-downs, drill-throughs, thresholds and filters).
- Because of diverse nature of commands, most metrics with thresholds need to be percentages (ie. Comparing number of courses is difficult if one command has 5000 and another has 100).
- Start with approved presentation standards (ie. No thermometers; no red-yellow-green unless showing status against threshold).
- Spreadsheets are easy to change and therefore sometimes lead to data integrity problems.